5 September 2002

Subject: KY Lock – Solicitation No. DACW62-02-B-0008 Instrumentation Program - Minutes of 8/28/02 Pre-Bid Conference

1. On 28 August 02 a pre-bid conference was held at the Kentucky Lock project site on the Instrumentation Program Solicitation. Attending were:

Jim Niznik	TVA
Beryl Newsome	Corps of Engineers
J. C. McDaniels	"
Tony Ellis	"
J.C. Mills	"
Richard Nimmo	"
Emily Carr	"
Brad Long	"
Barney Schulte	"
Ron Carter	"
Tim McCleskey	"
Tong Haw	"
Don Getty	"
William Abbott	"
Eric R. Snyder, PE	K. S. Ware & Associates, LLC
Jim Eudaly	Industrial Data Technologies
Mark Schuamann	Law Engineering
Bill Kremer	Shannon & Wilson
Dr. Allen Marr	Geocomp. Corp.
Craig L. Toon, P.G.	Keel Exploration, LLC
Ken Berry	URS Corp.
Jim Hummert	URS Corp.
Mark Yeager	Integrated Test & Measurement
Mike McMahan	Test & Controls International, Inc.
Andrew E. Lewis	Construction Technology Laboratories, Inc.
Mark Hermann	QORE, Inc.
Pierre Gouvin	Roctest
Lance Phares	Wyle Laboratories
Pat Fagerman	Wyle Laboratories
Jeff Messick	Johnson Controls
David John Dumey	Johnson Controls
Morris Bandy	ARCADIS
Ken Hardin, P. E.	Fuller, Mossbarger, Scott and May Engineers, Inc.
Scott Hoover	Predictive Maintenance (PMI).

2. Ms. Newsome opened the meeting by introducing the staff present from the Corps of Engineers and the Tennessee Valley Authority. She then explained her role as the contract specialist on this contract. Any modifications to the contract will be processed in her office. J.C. McDaniels, the Area Engineer for the KY Lock Project, will be the Contracting Officer's Representative for this contract. At least one amendment will be issued for this solicitation that will include an extension of the bid opening date to 19 September 2002. All amendments will be posted on the Nashville District's Contracting website. No amendment notices will be emailed to the registered planholders – it will be incumbent upon them to check the website on a regular basis during the solicitation period for amendments.

3. Ms. Carr summarized the purpose, main technical components and phasing of the contract. The purpose of the Instrumentation Program is to insure the integrity of the existing lock during the excavation and construction of the new lock. It is also to insure the work area for the new lock is maintained in a safe and relatively dry condition. A separate contract is being pursued to provide continuity and consistency of the instrumentation program throughout the life of the project. There will be at least 3 separate construction contracts during the period of instrumentation monitoring:

a) Upstream cofferdam
b) Upstream lock excavation
c) Downstream cofferdam and remainder of the new lock

The scope of the Instrumentation Program includes providing and installing all of the instrumentation **except:**

a) Cofferdam inclinometer casing,
b) piezometer tubing/casing,
c) alignment pins, and
d) Load cells.

The Instrumentation Contractor will specify materials and provide input to the installation of the above items except for the alignment pins. The Instrumentation Contractor will **maintain** all equipment, and **monitor** all of the instruments. The tiltmeters, inclinometers and piezometers will have permanent sensors for continuous monitoring. Ms. Carr then described the six phases of instrument installation.

4. A question and answer period followed Ms. Carr's presentation. These questions and answers are provided below.

a) Question – The bid schedule only shows 9 months for the monitoring and maintenance of instruments for Phase I . Will the monitoring and maintenance be discontinued after this 9 months?

Answer – No. It is expected that the instruments will only be operational for 9 months of the first contract year. The second and following contract years will include monitoring and maintenance of the instruments installed in Phase I.

b) Q – Will the Instrumentation Contractor or the Corps be responsible for providing phone service to the Instrumentation System?

A – The existing phone service to the lock does not have any extra capacity. It will be the Instrumentation Contractor's responsibility to obtain and make payment for any needed phone service. Reference section TP-2.11 (c) 6. "Data Transmission/Telephone" of the Specifications.

c) Q - What is the brand of PLC that will have to be "tapped into?"

A – The existing PLC system is a Square D Symax system. The Government will furnish and install PLC modules to provide 3 each isolated 4-20ma analog output signals proportional to submerged pressure transmitters in the headwater, chamber, and tailwater. The Government will provide the pressure transmitter ranges and base elevations for the Instrumentation Contractor to calculate these water level elevations. There is a possibility that the PLC system will be upgraded in the near future, but the upgraded system will have the same output as the existing system.

d) Q – Are the quantities for the inclinometer casing and sensor cabling correct?

A – The Corps will double check these quantities and include any corrections, if needed, in an amendment.

e) Q – Will there be a separate hole for each inclinometer sensor?

A – No. It is required that each hole accommodate the number of sensors shown in the plan.

f) Q – Will the instrumentation contractor be responsible for calibrating the load cells?

A – It is expected that this calibration will be the responsibility of the contractor installing the anchors and load cells. The specifications will be clarified if needed through an amendment.

g) Q – Will the Instrumentation Contractor be responsible for providing materials, specifications and Quality Assurance for the installation of inclinometer casing, load cells and other instrumentation features to be installed by other contractors?

A – The Instrumentation Contractor is required to provide specifications for the materials and installation process of all instrumentation features by other contractors and will be expected to participate in the installation of these features (e.g., inclinometer casings on the cofferdams). However, the Corps will provide the QA for these installations and the

Instrumentation Contractor's input to the installation process will be through the Corps. The Instrumentation Contractor will not provide any materials for features to be installed by other contractors.

h) Q – A vibrating wire load cell cannot meet the one minute criteria for checking against threshold values for alarm purposes. Will this criteria remain?

A – The Corps will revisit this issue and revise the specifications by an amendment if warranted.

i) Q – Will the remote monitoring sites in Nashville and Chattanooga be required to be installed and functional in Phase I.

A – Yes.

j) Q – Will a performance bond be required?

A – No.

k) Q – The specifications call for two readings a day at 10:00 a.m. and 7:00 p.m. Can these be changed to 7:00 a.m. and 7:00 p.m.

A – No. The times are specified because of temperature requirements during those times of the day. It must be possible for the Instrumentation Contractor to supply data on the specified times as well as others. It was pointed out that the data loggers provided for this contract should be flexible enough to accommodate routine changes in the times that data is collected since many different types of construction activities will require this flexibility.

l) Q – Will the concrete cutting involve the cutting of reinforcement steel?

A – It is not known. The Corps will check the as-built drawings and include this information in an amendment.

m) Q – Who will be responsible for restroom facilities, drinking water, and waste disposal for the employees in this contract?

A – It will be the responsibility of the Instrumentation Contractor to provide these facilities. The concrete cuttings can be disposed of in the project's identified disposal areas. (**Post meeting note:** As stated in Section TP-1.13 of the Specifications, only clean concrete with no embedded steel will be allowed in the project's identified disposal areas)

n) Q – Where can water be obtained for the concrete cutting?

A – The lake water is probably suitable for this use.

o) Q – Will the area provided for an office/storage trailer be convenient and will power be supplied?

A – The area provided is close by and participants can view is at the site visit. It will be the Instrumentation Contractor's responsibility to provide power to the trailer through the local electrical supplier.

p) Q – Will this contract have union requirements?

A – We don't know but will research the issue. After checking, there is a union agreement in the area. There is an electricians union, Paducah, Kentucky Division, Southern Indiana Chapter, N.E.C.A., Inc. and Local Union 816, I.B.E.W. in effect. You may get a copy of this agreement by requesting a copy from Gary Seay at 270-898-2456.

q) Q – Is there a grounding system at the lock that can be tied into?

A – Yes there is a grounding grid. Connections to the grid will be through mechanical connections.

r) Q – Are lightning strikes prevalent at the site?

A – Mr. Mills explained that the lock has not had any equipment problems on the landside of the lock due to lightning in the 10 years that he has been there. It appears that most lightning strikes the riverward side of the lock when it strikes in the area.

s) Q – Is the power reliable at the site?

A – Normally yes. Power is provided via two dedicated feeders from the Kentucky Dam powerhouse – one acts as a back-up. Power is switched from feeder to feeder as required for testing and maintenance which results in short interruptions of power, normally only a few seconds or minutes at most. The Government will provide a non-fused disconnect fed from a dedicated 460VAC breaker wall-mounted near the space allotted for the Instrumentation Contractor's Site Monitoring Station in the basement of the Operations Building. Backup emergency power is not a requirement of this contract.

t) Q – Is a superintendent required full time at the site?

A – The specifications only require a superintendent or someone acting on his behalf to be at the site during installation of equipment. It is not anticipated nor required that the Instrumentation Contractor have personnel at the site full time during the contract period.

u) Q – Will all contractor personnel at the site be required to be knowledgeable of the alarm system? Could a manual on the system be used instead.

A – The Corps will investigate this requirement and modify as necessary.

v) Q - Will the Instrumentation Contractor have access to the equipment used by the anchor contractor for installing the conduit and wiring required under the Instrumentation Program contract?

A – The Corps will investigate including wording in the anchor installation contract to ensure access to the load cells is available to the Instrumentation Contractor. (**Post meeting note:** The Corps has decided that only standard language on required coordination between contractors will probably be included in future construction contracts. Therefore, bidders on this Instrumentation Contract should not assume that access to other contractors equipment will be available.)

5. A site visit was then made to Kentucky Lock and its surroundings. An installed Relative Block Movement Device between monoliths L2 and L3 was shown to the attendees. Questions and answers and other points from that visit are described below:

a) Q – Who will be responsible for grouting the inclinometer casings in the lock monoliths?

A – The Instrumentation Contractor.

b) The painted locations of inclinometers for L3 and L4 have been moved.

c) The plan location of the inclinometer on L4 on Dwg 851-1 is shown incorrectly.

d) No connections to the existing piezometers on the lock are required.

e) Mr. Mills showed where access to the grounding system could be obtained in the miter gate equipment recess on monolith L4.

f) Mr. Schulte showed a floating mooring bit recess and explained the requirement that any conduit/wiring installed by the Instrumentation Contractor will have to accommodate the removal of the mooring bit through the top of this recess.

g) Q – Will the load cells ever be flooded?

A – Not during their functional life.

h) Q – What kind of loading will the grating accommodate?

A – This information will be included in an amendment.

i) Q – What kind of survey controls will be available?

A – The monuments on the lock wall were shown. In addition, information on the many other monuments in the project site will be provided to the Contractor. Refer to Technical Provisions TP-2.9 (g).

j) Access to the three electrical manholes and their conduit banks into the basement of the Operations Building was discussed. The Instrumentation Contractor will be allowed to access the manholes to tie into the grounding grid at these locations, but that will be the only access allowed. There will not be any access allowed to the existing conduit bank. The access of the instrumentation conduit/wiring to the basement of the lock operations building will be through the vent on the downstream side of the building. (**Post meeting note:** The Corps has since determined that access to the manholes will not be provided to the Instrumentation Contractor. Other approved access locations to the grounding grid will be shown in an amendment.)

k) Q – Will solar panels be allowed?

A – Yes as long as they don't interfere with lock or other construction operations. Environmental considerations such as bird impacts should be considered.

l) Mr. Hubbard described the security fencing that is anticipated to be installed from approximately mid-November 2002 to about January 2003. A security gate will be installed at the top of the upstream ladder on the lower landward approach wall. This will probably require the Instrumentation Contractor to trench around this gate. A 7 foot tall security fence with three rows of barbed wire on top will be installed for much of the length of the lock wall on its landward side on the outside of the handrail. A plan view of this fence's approximate location will be provided in an amendment. (**Post meeting note**: The Corps is investigating redesigning the alignment of this fence to keep it off the lock wall as much as possible. The expected new fence alignment where it potentially will impact the Instrumentation Program will be shown in plan view in an amendment.)

m) The Corps will not provide any additional environmental controls in the basement of the lock operations building. The basement temperature does fluctuate with the outside temperature. Any additional environmental controls required by the Instrumentation System will be the responsibility of the Instrumentation Contractor. (**Post meeting note**: The Corps will not relax the requirement that the Site Monitoring Station shall be located in the basement of the Operations Building)

n) Power, telephone, and water are available in Area 5 but they will be the responsibility of the Instrumentation Contractor to connect to through the appropriate utility owner. There are no sanitary sewage collection or treatment facilities available within Area 5.

o) Q - Can the concrete pad partially exposed on the floor within the site monitoring station be removed and can the 480V electrical outlet post on the pad be used under this contract?

A – The portion of the concrete pad designated within the SMS may be used later for other operations by lock personnel and is not to be removed. The electrical post may be used by the Instrumentation Contractor if approved by the Government. However, the 480V outlet post would require reactivation before being used.

Don Getty
Project Manager
KY Lock Addition